0102E1307

Candidate's Seat No : _____

MSc Sem.-1 Examination

401

Clinical Research

February-2025

Time : 2-30 Hours] **[Max. Marks : 70**

Q.1. Discuss the structure of a prokaryotic cell in detail with a labelled diagram. 14

OR

Q.1. (A) Give detailed account of the structure of the virus. 07

(B) Discuss preservation methods used for microorganisms. Write advantages and limitations of each. 07

Q.2. Discuss rDNA technology in detail and give its importance in biotechnology. 14

OR

Q.2. (A) Explain various blotting techniques and write applications of each. 07

(B) Describe polymerase chain reaction with its importance in clinical research. 07

Q.3. Describe various viral diseases with their symptoms, causative agents, transmission and treatment. 14

OR

Q.3. (A) Explain various techniques of Ag-Ab reaction based diagnostic immunoassay. 07

(B) Describe types of host-parasite associations with suitable examples. 07

Q.4. Discuss criteria, types with examples, and steps involved in patenting. Give significance of patenting. 14

OR

Q.4. (A) Write a detailed note on NABL. 07

(B) Describe significant aspects of quality assurance and quality control. 07

Q.5. Write 1-2 line answers to **any seven** of the following 14

a. Define – generation time

b. Explain – pasteurization.

c. Draw a neat labelled diagram of the bacterial growth curve.

d. Define – plasmid.

e. Define – transcription.

f. What is the name first transgenic cow and how is it helpful?

g. What are opportunistic pathogens?

h. What is the major difference between innate and acquired immunity?

i. Widal and Weil-Felix test are used for diagnosis of which diseases?

j. Write the full forms of WDCM and NCIM.

k. What is the significance of a culture collection centre?

l. What do you mean by bioethics?

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